

What is Claimed Is:

1. A multiport data communication system for transferring data packets between ports, the data communication system comprising:

a plurality of ports for receiving and transmitting the data packets,

a decision making engine responsive to received data packets for directing the received data

5 packets to the ports selected for transmission of the received data packets,

the decision making engine including:

a plurality of queuing devices corresponding to the plurality of ports for queuing data blocks representing the data packets received by the corresponding ports,

logic circuitry responsive to the plurality of queuing devices for processing the data blocks in

10 accordance with a prescribed algorithm to determine destination information,

a forwarding circuit responsive to the logic circuitry for identifying at least one transmit port , and

a traffic capture mechanism for enabling one port of said plurality of ports to output data transferred via multiple other selected ports of said plurality of ports.

2. The system of claim 1, wherein said one port is a sniffer port for connecting to a probe for monitoring data traffic.

3. The system of claim 2, wherein said multiple other selected ports are multiple sniffed ports monitored by the probe via the sniffer port.

4. The system of claim 3, wherein said traffic capture mechanism comprises a sniffer port configuration circuit for selecting the sniffer port among said plurality of ports.

5. The system of claim 4, wherein said traffic capture mechanism further comprises a snuffed port configuration circuit for selecting the multiple sniffed ports among said plurality of ports.

6. The system of claim 5, wherein said sniffer port configuration circuit is configured to enable and disable monitoring of data traffic on the multiple sniffed ports.

7. The system of claim 5, wherein said snuffed port configuration circuit is configured for storing a snuffed port vector having a plurality of port bits corresponding to the plurality of ports.

8. The system of claim 7, wherein the port bits are set into predetermined states to select at least one of the multiple sniffed ports.

9. The system of claim 8, wherein the forwarding circuit is configured to generate a forwarding descriptor identifying the ports for transmitting the data packets.

10. The system of claim 9, wherein the forwarding circuit is configured to determine whether a port that received a data packet is one of the multiple sniffed ports.

11. The system of claim 10, wherein the forwarding circuit is configured to include sniffer port data into the forwarding descriptor, if the port that received the data packet is one of the multiple sniffed ports.

12. The system of claim 10, wherein the forwarding circuit is configured to determine whether destination information supplied to the forwarding circuit indicates that at least one of the sniffed ports is selected for transmission of a data packet.

13. The system of claim 12, wherein the forwarding circuit is configured to include sniffer port data into the forwarding descriptor, if at least one of the multiple sniffed ports is selected for transmission of the data packet.

14. In a communication network having a plurality of ports and a decision making engine for controlling data forwarding between the ports, a method of monitoring network activity, comprising the steps of:

5 placing data blocks representing received data packets in a plurality of data queues to be processed by the decision making engine,

processing the data queues by logic circuitry in accordance with a prescribed algorithm to determine destination information,

identifying at least one port for transmitting data packets based on the destination information,

10 selecting multiple sniffed ports among the plurality of ports for monitoring the data packets transferred via the sniffed ports, and

selecting a sniffer port among the plurality of ports to provide output of the data packets transferred via the sniffed ports.

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15. The method of claim 14, wherein the step of identifying at least one port for transmitting data packets comprises determining whether a port that received a data packet is one of the multiple sniffed ports.

16. The method of claim 15, wherein the sniffer port is identified as at least one of the ports for transmitting the data packet, if the port that received the data packet is one of the multiple sniffed ports.

17. The method of claim 14, wherein the step of identifying ports for transmitting data packets comprises determining whether the destination information indicates that at least one of the multiple sniffed ports is selected for transmitting a data packet.

18. The method of claim 17, wherein the sniffer port is identified as a port for transmitting the data packet, if at least one of the multiple sniffed ports is selected for transmitting the data packet.

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